

Academic management application project

Executive Document

Course: Software models and documentation

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Summary

This project presents the development of an academic management application for students. The purpose is to help students organize tasks, schedules, and grades more effectively. The system gives a simple solution to the common problem of poor time management and lack of academic organization. With this tool, students can improve productivity, reduce forgetfulness, and have a clear vision of their academic performance.

Problem statement

Many students today have difficulties organizing their academic activities. Traditional tools, such as physical agendas or general mobile apps, do not always respond to their specific needs.

This creates problems such as:

Forgetting tasks and deadlines

Difficulty calculating academic averages.

Lack of clarity in daily and weekly schedules.

Low productivity due to weak planning.

These problems affect academic results and increase stress levels.

Justification

The application is important because students need a tool that is practical and focused only on academic life. Unlike other general apps, this solution integrates in one place: Task management, schedules, grades, reminders, and interface personalization. It brings value by supporting organization, autonomy, and productivity for students.

objectives

General objective

To develop an academic management application that allows students to organize their activities and improve their academic performance with practical and customizable tools.

Specific objectives

- Create a system for registering and controlling tasks.
- Design a schedule module for daily and weekly planning.
- Add a grade system with automatic average calculation.
- Include reminders to prevent missed deadlines.
- Allow interface personalization for user comfort.

Solution description

The application is developed in C++ with SQLite as the local database manager. This ensures speed, portability, and offline use.

Main features:

- Task management: register, check and update academic tasks.
- Schedule module: Visualize classes and activities.
- Grades system: Save grades and calculate averages.
- Reminders: Alerts for exams, tasks and deadlines.
- Personalization: Customize interface options.

Advantages → Easy to use, offline access, and focused on academic organization.

expect results

Better control of academic activities.

Fewer forgotten tasks with automatic reminders.

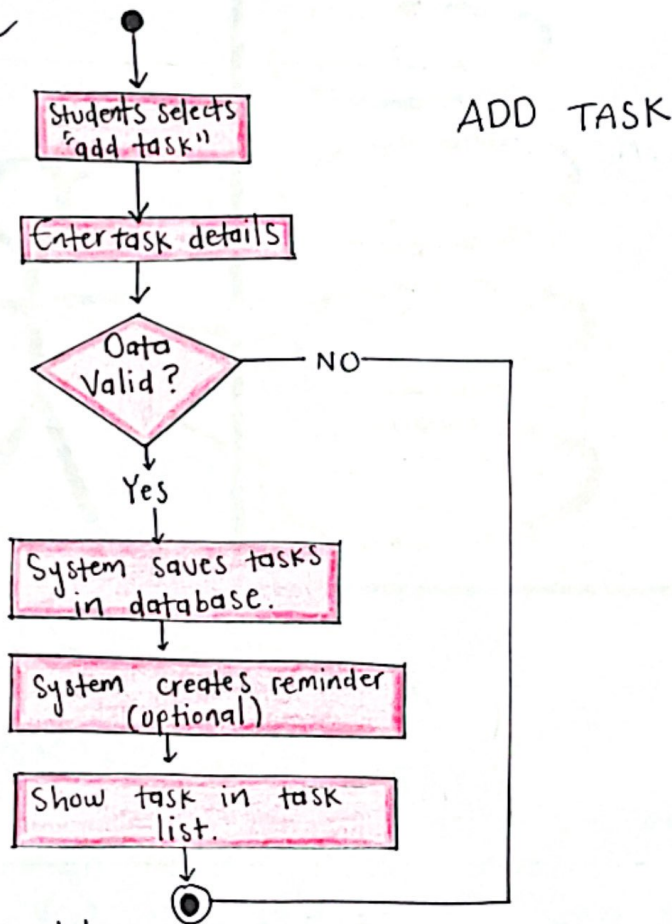
Better time organization with integrated schedules and tasks.

Clear vision of academic performance with automatic averages.

Adaptable tool for each student's needs.

UML diagram (Activity Diagram)

example



Activity Schedule

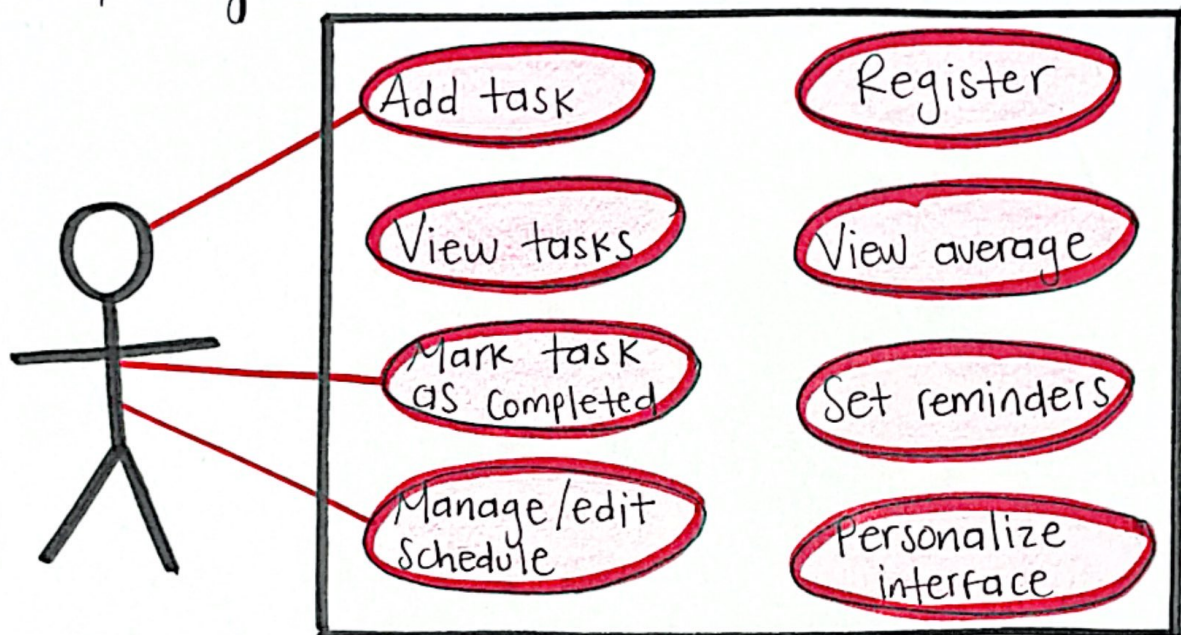
Phase/Activity	Estimated time
1. Analysis and requirements	Week 1
2. System design (UML)	Week 2
3. Module development	Weeks 3-5
4. Integration and testing	Week 6
5. Documentation and Presentation	Week 7

Activity schedule

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The activity schedule presents the main phases of the project in a simple way. It starts with the analysis of needs and requirements, followed by the design of the system using UML diagrams and the database. Then, the development phase focuses on creating the application modules. After that, the modules are integrated and tested. Finally, the project ends with documentation and presentation of results.

UML diagram



Conclusion

The academic management application is a practical solution for the organization problems students face. It helps to increase productivity, reduce stress, and provide a clear view of academic performance. In the future, the project can grow with a mobile version and advanced reporting tools.